



KINETICS

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IIT-JEE | Medical | Foundations

Practical Geometry

Question 1.

How many lines can draw from a given point.

- (a) 1
- (b) 2
- (c) Infinite
- (d) None of these

Answer: (c) Infinite

Question 2.

How many parallel lines can draw from a outside point of a given line ?

- (a) 1
- (b) 2
- (c) Infinite
- (d) None of these

Answer: (a) 1

Question 3.

Which among the following is used to construct a triangle?

- (a) The lengths of the three sides.
- (b) The perimeter of the triangle.
- (c) The measures of three angles.
- (d) The names of three vertices.

Answer: (a) The lengths of the three sides.

Question 4.

How many parallel lines can be drawn passing through a point, not on the given line?

- (a) 2
- (b) 1

- (c) 3
- (d) 0

Answer: (b) 1

Question 5.

In which of the following cases is the construction of a triangle not possible?

- (a) Measures of 3 sides are given.
- (b) Measures of 2 sides and an included angle are given.
- (c) Measures of 2 angles and a side are given.
- (d) Measures of 3 angles are given.

Answer: (d) Measures of 3 angles are given.

Question 6.

Identify the true statement.

- (a) A triangle with 3 equal sides is isosceles.
- (b) A triangle with a 110° angle is right angled.
- (c) A triangle with 3 acute angles is acute angled.
- (d) A triangle with 2 equal sides is equilateral.

Answer: (c) A triangle with 3 acute angles is acute angled.

Question 7.

Choose the correct option in which a triangle CANNOT be constructed with the given lengths of sides.

- (a) 3 cm, 4 cm, 5 cm
- (b) 7 cm, 6 cm, 5 cm
- (c) 10 cm, 7 cm, 2 cm
- (d) 12 cm, 8 cm, 6 cm

Answer: (c) 10 cm, 7 cm, 2 cm

Question 8.

Which is the longest side in the triangle ABC right angled at B?

- (a) BC
- (b) AC
- (c) AB
- (d) None of these

Answer: (b) AC

Question 9.

ΔPQR is a triangle right-angled at P. If $PQ = 3$ cm and $PR = 4$ cm, find QR.

- (a) 3 cm
- (b) 7 cm
- (c) 5 cm
- (d) 8 cm

Answer: (c) 5 cm

Question 10.

Which is the longest side in the triangle PQR right angled at P?

- (a) PR
- (b) PQ
- (c) QR
- (d) None of these

Answer: (c) QR

Question 11.

The sum of the lengths of any two sides of a triangle is _____ the third side of the triangle.

- (a) less than
- (b) doubled
- (c) greater than
- (d) half

Answer: (c) greater than

Question 12.

A/an _____ connect a vertex of a triangle to the mid-point of the opposite side.

- (a) altitude
- (b) vertex
- (c) median
- (d) None of these

Answer: (c) median

Question 13.

In the Pythagoras property, the triangle must be _____ .

- (a) acute-angled
- (b) obtuse-angled
- (c) right-angled
- (d) None of these

Answer: (c) right-angled

Question 14.

Which is the longest side of a right triangle?

- (a) Hypotenuse
- (b) Base
- (c) Perpendicular
- (d) None of these

Answer: (a) Hypotenuse

Question 15.

A triangle in which all three sides are of equal lengths is called _____.

- (a) Equilateral
- (b) Scalene
- (c) Isosceles
- (d) None of these

Answer: (a) Equilateral

Question 16.

A triangle can be drawn if the hypotenuse and a _____ in the case of a right-angled triangle.

- (a) base
- (b) hypotenuse
- (c) leg
- (d) None of these

Answer: (c) leg

Question 17.

Sum of the lengths of any two sides of a triangle is greater than the length of the _____.

- (a) first side
- (b) second side

- (c) third side
- (d) none of these

Answer: (c) third side

Question 18.

A triangle can be drawn if ____ angles and one side given.

- (a) 2
- (b) 3
- (c) 4
- (d) None of these

Answer: (a) 2

Question 19.

The exterior angle of a triangle is _____ in measure to the sum of interior opposite angles.

- (a) equal
- (b) unequal
- (c) different
- (d) None of these

Answer: (a) equal

Question 20.

ΔABC is right-angled at C. If $AC = 5$ cm and $BC = 12$ cm find the length of AB.

- (a) 17 cm
- (b) 7 cm
- (c) 13 cm
- (d) None of these

Answer: (c) 13 cm

Fill in the blanks:

1. The exterior angle of a triangle is equal in measure to the sum _____ of opposite angles.

Answer: Interior

2. The total measure of the three angles of a triangle is _____.

Answer: 180°

3. Sum of the lengths of any two side of a triangle is _____ than the length of the third side.

Answer: greater

4. In any right angled triangle, the square of the length of hypotenuse is equal to the sum of the _____ of the lengths of the other two sides.

Answer: squares

To construct a triangle of following sets of measurement given.

5. _____ sides.

Answer: three

6. Two sides and the angle _____ them.

Answer: between

7. Two angles and the side _____ them.

Answer: between

8. The hypotenuse and a _____ in the case of a right-angle triangle.

Answer: legs

Below are given the maximum of certain sides and angles of triangles. Identify those can be constructed and these can not be constructed.

Question 1.

$\triangle ABC$ $m\angle A = 85^\circ$, $m\angle B = 115^\circ$, $AB = 5\text{cm}$

Answer: No

Question 2.

$\triangle PQR$ $m\angle Q = 30, m\angle R = 60, QR = 4.7\text{cm}$

Answer: Yes

Question 3.

$\triangle ABC$ $m\angle A = 70, m\angle B = 50, AC = 3\text{cm}$

Answer: Yes

Question 4.

$\triangle LMN$ $m\angle L = 60, m\angle N = 120, LM = 5\text{cm}$

Answer: No

Question 5.

$\triangle ABC$ $BC = 2\text{cm}, AB = 4\text{cm}, AC = 2\text{cm}$

Answer: No

Question 6.

$\triangle PQR$ $PQ = 3.5\text{cm}, QR = 4\text{cm}, PR = 3.5\text{cm}$

Answer: Yes

Question 7.

$\triangle XYZ$ $XY = 3\text{cm}, YZ = 4\text{cm}, XZ = 5\text{cm}$

Answer: Yes

Question 8.

$\triangle DEF$ $DE = 4.5\text{cm}, EF = 5.5\text{cm}, DF = 4\text{cm}$

Answer: Yes
